WHAT IS CLAIMED IS:

1. A recording method comprising:

a step of ejecting onto a recording material ink having a Ka value of not more than 3 (ml.m⁻².msec^{-1/2});

applying to the ink deposited on the recording material processing liquid having a Ka value of not less than 5 (ml.m⁻².msec^{-1/2}) to insolubilized a coloring material in the ink inside the recording material:

wherein the processing liquid is applied to the ink after rapid swell start point to after penetration of the ink into the medium passes after the ink is deposited on the recording material.

15

20

10

5

2. A recording method comprising:

ejecting onto a recording material ink having a Ka value not less than 1 (ml/m⁻² msec^{-1/2}); then applying heat to the ink; and

applying to the ink processing liquid having a Ka value not less than $1/(m1.m^{-2}.msec^{-1/2})$.

3. A recording method comprising:

ejecting to a recording material ink having a 25 Ka value not more than 1 (ml.m⁻².msec^{-1/2}) and having a penetration property which increases with heat; then applying heat to the ink; and

applying to the ink processing liquid having a Ka value not less than 1 (ml.m $^{-2}$.msec $^{-1/2}$).

Control :

- 4. An apparatus according to Claim 1 or 3, further comprising applying heat to a reaction product of the ink and the processing liquid after said processing liquid applying step.
- 5: A recording method according to Claim 4, wherein Ka value is not more than 5 ($ml.m^{-2}.msec^{-1/2}$).
- 6. A method according to Claim 1 or 5, wherein the ink contain pigment.
- 7. A method according to Claim 1 or 6, wherein the ink is a black ink, and after application of the processing liquid, color ink is deposited.

4 20 20

15

25

8. A recording method comprising:

depositing ink containing a coloring material having a polarity onto a recording material; then applying to the ink processing liquid having a polarity opposite from that of said coloring material after rapid swell start point to after penetration of the ink into the recording material. So that coloring material in the ink is insolubilized by the processing liquid at least insid the recording

materia].

wand out

9. A method according to Claim 1 or 8, wherein the ink and the processing liquid is ejected to the recording material by generating a bubble by application of thermal energy to the ink and to the processing liquid.

The first control of the first

10

MAR

15

20

25